Assembled Den Meeting Plan – WEBELOS (4th Grade)

This ***Assembled* Den Meeting Plan** combines ideas from Webelos Adventures Den Meeting Resources found at Scouting.Org (or from the requirements), into the parts of a quality Den Meeting, which are **Preparation** (plan + collect materials needed), **Gathering** (something for early arrivals to do), **Opening** (a ceremony to start), then **Activities** (an Activities Intro chat, followed by a series of activities, ideally alternating quiet and energetic fun), **Closing + Recognition** (ceremony), and **After the Meeting** (follow up) …

Webelos – 4th Grade

Build It

A "Carpentry" Adventure

ELECTIVE (2 "electives" are needed to earn Webelos Rank)

Snapshot of Adventure. If you visit a lumber store, you'll see rows and rows of all sorts of wood: boards, dowel rods, sheets of plywood, cedar shingles, and more. With some tools and time, a skilled craftsperson can turn that wood into toys, bookcases, or even an entire house. You won't build a house in this Adventure, but you will build a smaller carpentry project. You'll also learn about the tools you could use to build just about anything you can dream up. So, grab your tool belt, and let's get started.

The QR Code above takes you to scouting.org/cub-scout-adventures/build-it/

This Den Meeting Plan adapts Activity content from that Scouting link with other fun, simple, easy ideas. For more, see the Adventure Resources at the end of this Plan for a list of the suggested Activities at that link.

Requirements from the Webelos Handbook

1. **Learn about some basic tools and the proper use of each tool. Learn about and understand the need for safety when you work with tools.**
2. **Demonstrate how to check for plumb, level, and square when building.**
3. **With the guidance of your Webelos den leader, parent, or legal guardian, select a carpentry project that requires it to be either plumb, level, and/or square. Create a list of materials and tools you will need to complete the project.**
4. **Build your carpentry project.**

Meeting Plan

Does this take one Meeting to complete – or more? It's up to the Parents / Leaders! As written, you can do this in a single session if you're super-efficient and have uncomplicated projects (sad!), but you'll probably want to allocate more time across more than one session (and add some games just for fun).

PREPARATION (and materials needed): Read the Build It Adventure in the Webelos Handbook.

- As always, decide whether you like any of the "Activity Card" options for the Requirements or the suggested activities below or some other way to deliver this Adventure.
  - When you decide, check the materials and supplies you need.
- Determine what projects you'll have the Scouts build, and where and how you'll build them.
  - This is an Adventure where you'll want to invite a local carpenter, woodworker, etc., to assist with the den meeting if you don't have carpentry skills among the parents. Ask around the pack too – many packs have a few woodworkers who love to help with this. Check with local hardware stores, home improvement stores, because woodworkers will be out there.

    - Invite parents and extended family to attend … you'll want plenty of helpers to keep Scouts safe. It's helpful if each Scout has an adult or an older Scout helper (like a Den Chief) for a one-to-one ratio.
    - Possible locations for this Adventure could be a workshop or garage at a home hobby, a cabinet shop, a trade school that teaches woodworking, or local hardware stores or home improvement stores – also consider an "art room" or "shop room" at a local school, for working on the finish on the wood projects. They may also be OK with bringing in tools for the cutting and other work, so long as you clean up.
    - Be sure all families know when and where to meet, what to bring, and what you'll do. This is a good Adventure to not wear your nice uniform, but something that is OK getting sawdust or paint on it.
- If you don't do projects from the Webelos Handbook, bring sample wood project plans for review during the planning process. The local library or the Internet are both good resources for locating project plans.
    - Bring paper and pencils for use in finalizing designs and plans, marking wood for cutting, etc.
    - If your designs need nails, screws, or the like, bring those and the tools needed.
- Samples of the hand tools and safety items referenced in the Webelos Handbook.
    - Hammer, flathead screwdrivers, Phillips screwdrivers, Allen wrenches, chisels, awls, pliers, hand and coping saws, vise/clamp, tape measure or ruler or square, level, brace/bit hand drill, sandpaper and sanding block, safety glasses, toolbox, and first aid kit.
    - Make sure that all Scouts have appropriate safety equipment.
- Bring scrap pieces of wood for practice in learning about tools and tool safety.
    - Consider local hardware stores, home improvement stores, home building sites, recycling centers, and wood pallet companies as sources for wood.

GATHERING: A "gathering" activity is to keep Scouts occupied as the rest of the den arrives. *What you do will depend on your location and leadership resources*.

- Use gathering time to connect with adults and "share the leader load": everyone can help with something! A good approach is for different parents (or teams) to share the "lead" of parts of the Adventure below.

OPENING: (Parent leader: _____) An Opening ceremony says, "we've begun" and helps set the tone.

- Maybe: a simple ceremony you like that includes the Pledge of Allegiance and the Scout Oath and/or Law.

ACTIVITIES (See also other Activities linked at Adventure Resources – use those if you like them):

◆**Activity Intro:** (Parent leader: _____) As you move into Activities, have some "talk time" where you (1) discuss today's Adventure activities (what you'll do, how you'll do it – share in a way to get the Scouts excited) and (2) let each of the Scouts share "what's new" with them and get to know each other better.

◆**Activity 1: Know Your Tools (Requirement 1: "***Learn about some basic tools and the proper use of each tool. Learn about and understand the need for safety when you work with tools.***") (Parent leader: _____)**

The Adventure Resources offer an Activity Card of Tool Safety and Practice, adapted below.

Supply List: In this Adventure Scouts will learn how to safely use common tools. Feel free to adjust this recommended list based on your available resources – just be sure to include tools that will be used to complete whatever projects you'll do for Activity/Requirement 4 below.

- Power drill **(For adult use only)**
- 1/16" drill bit to drill pilot holes for screws
- ¾" drill bit for wrench activity
- 12-to-16-ounce claw hammers
- Philips head screwdrivers
- Flathead screwdrivers
- 20" hand saws
- Levels
- Vice or clamp
- 1 lb. box of 1 1/2" penny or common nails
- 50 – ½" wood screws, Philips head
- 50 – ½" wood screws, flathead
- 6 – 2 ½" long ¾" carriage bolts with nuts
- 1 ft long 1" x 4" pine, two per Scout

- 6” slip joint pliers
- Standard wrenches that fit the nut to the 2 ½” long ¾” carriage bolt
- Socket wrenches with a socket that fits the nut to the 2 ½” long ¾” carriage bolt.
- ½”, ¾”, OR 1” wood chisels
- 1 awl
- 2 sheets of 60 grit sandpaper
- 2 sheets of 120 grit sandpaper
- 2 sheets of 220 grit sandpaper
- Measuring tapes
- Carpenter’s squares
- 1 ft long 2” x 4” pine, one per Scout
- 1 ft long 2” x 4” pine, for wrench station
- 1 ft long 4” x 4” pine, for chisel and wood file station
- Rag or cloth, one per Scout.
- Safety glasses for each Scout
- Timer
- Youth sized working gloves, one pair for each Scout.
- KN95 5-layer respirator masks, one for each Scout
- First aid kit

Preparation. After you’ve gathered your supplies:

- Pre-drill a few pilot holes for the screwdriver activity in the 1” x 4” boards.
- Take the 1 ft. long 2” x 4” and drill six ¾” holes equally spaced along the board.
  - Insert the 2 ½” carriage bolts and place the board so the threads of the bolts where the nuts go are facing up.
  - Place the nuts for each bolt next to each bolt.
- **Tool Stations.** Set up meeting the space with Tool Stations that allow Scouts to have room to safely use each tool. Each station should have the tools and wood that allow Scouts to practice using the tool and an adult to supervise.
  - *Safety Equipment Check Station*: safety glasses, gloves, ear protection, and mask.
  - *Hammer Station*: 6” long piece of 2” x 4” for each Scout and 1” common penny nails 5 per Scout.
  - *Screwdriver and Awl Station*: see above.
  - *Wrench and Pliers and Bolts Station*: see above.
  - *Chisel and Sanding Station*: see above.
  - *Saw Station*: see above.
  - *Measuring Tape, Carpenter’s Square, Level, Clamp, and Vise Station*: see above.

Station to Station Activities. Divide the Scouts into equal groups based on the number of stations and adult helpers. Have each group of Scouts start at a different station.

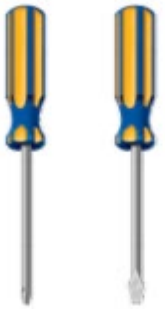
- **Safety Equipment Check Station – Review Tool Safety Rules.** Share with your Scouts the information in the *Webelos Handbook*. Have your Scouts explain why tool safety is important and what can happen if safety rules aren't followed. Be sure to cover the following items:
  - Hand protection: Wear gloves when necessary (handling lumber, boxes of nails, etc.), and ALWAYS position your fingers and thumb carefully when cutting.
  - Eye Protection: Safety glasses are a must, ALWAYS AND ON EVERY PROJECT. If you wear prescription glasses, side shields can be purchased that slip onto the earpieces of the frame. This prevents debris and dust from entering your eye from the side.
  - Feet Protection: Wear good quality leather shoes with thick soles if possible. This type of shoe will protect your foot if something falls on it and prevent a puncture if you step on a nail. *NEVER WEAR sandals, flip-flops, or open-toed shoes, etc.*
  - Nose and Lung Protection: Small dust particles can be inhaled quite easily through your nose and mouth. Cutting, sanding, drilling, etc. – all create these particles. *You know you still have masks!*

- Head Protection: Wearing a hard hat is a good idea when you are working in an area that may have falling items or debris.
- Ear Protection: Your hearing can be damaged very easily. Be certain you wear good quality ear protection when you are in an area that may have construction noise (like power tools).

- **Hammer station:** Share with Scouts that they will practice using their hammer. Demonstrate the proper use of a hammer to hammer a nail and how to use the claw to remove a nail.
  - Hand out one piece of the 1" x 4" pieces of lumber.
  - Have Scouts see how many hits it takes to drive a nail into a piece of wood. Their parent or legal guardian can count.
  - Next, have Scouts see how many nails they can drive in five minutes.
  - Set a timer and let them hammer for 5 minutes. Once they have stopped, have them count the number of nails and share with the den.



- **Screwdriver and Awl Station:**

Awl • An awl is a tool used for making small holes in wood and leather. • It has a wooden handle and a thin, sharp metal point.		Screwdrivers • Screwdrivers drive screws into wood. • Screwdrivers come in many sizes. • Some are for slotted screws (straight slots on their heads), and "Phillips" screws (X-shaped slots).	

  - Demonstrate that you can use an awl to help start a hole for a screw – this is called a pilot hole.
  - In this case share with the Scouts, you drilled a pilot hole smaller than the screw.
  - A pilot hole will help prevent the wood from splitting when using a screw.
  - Hand out the second piece of 1" x 4" board and have them use their screwdriver to screw in both a flathead and Phillips head screw.

- **Wrench and Pliers and Bolts Station:** Inform the Scouts that these are carriage bolts and nuts and pliers and wrenches to fasten the nuts and bolts.

	Carriage Bolts • Carriage bolts are versatile fasteners, most often used to fasten metal to metal or wood to metal. • Their unique design ensures a robust connection.		Pliers • Pliers let you grip and twist things, bend and snip wire, and more. • Types include needle-nose pliers, locking pliers, standard/slip-joint pliers, and wire-cutters.

Standard Wrenches • Better than pliers for standard nuts and bolts because ... • … with the right size for the nut/bolt, you have less risk of damaging the nut and bolt.		Socket Wrenches • A wrench with a "ratcheting" mechanism. • Advantage: speed in getting bolts on/off. • But may not fit tight spaces.	

- To fasten a nut to the bolt you have several options.
- You could use slip join pliers, a standard wrench, or a socket wrench.
- Demonstrate each and then allow Scouts to tighten and loosen the nuts using the plyers first, then the standard wrench, and then the socket wrench.
- Lead a discussion on which one they found the easiest to use.

- **Chisel and Sanding Station:** Explain to Scouts that a chisel is used to carve away wood.

Chisel • With a sharp tip, used for shaving away small amounts of wood.		File and Rasp • File: used to make wood or metal smooth (e.g., sharpen metal blades).		Sandpaper and block • Attach sandpaper to the block.	
• Hold it against wood – hit the end of the handle with a mallet.		• Rasp: with a rough surface, used to shape or remove excess material.		• Comes in various "grit" sizes.	• Smaller numbers are coarser sandpaper.

- Demonstrate the proper use of the chisel then let each Scout practice on the 4" x 4".
- Explain that sandpaper comes in different types that are measured in grits. The lower the grit number the rougher the sandpaper the higher the grit number the smoother the sandpaper.
  - Lower grit sandpaper like 60 grit is used to remove paint or finish off wood or to shape wood.
  - Medium grit sandpaper like 120 is also good for shaping wood.
  - Fine grit sandpaper, like 220 is good to use before applying paint or in between coats of paint.
- Have Scouts place their masks on and give each one a chance to sand a place on the 4" x 4" using each of the different grits of sandpaper and feel the differences it leaves on the wood.

- **Saw Station:**

	Hand Saw • A 14-inch rough-cut handsaw is for cutting smaller pieces of wood.		Coping saw • Make detailed or curved cuts in wood, plastic, or foam.

- Put on your mask and have Scouts put on their masks as you demonstrate the proper way to saw.
- Hand out the 1" x 4" boards and let Scouts use the hand saw to cut through the wood.
- Have the Scouts check their cuts to ensure they are straight and not slanted.
- Let the Scouts make several cuts to get experience and confidence.

- **Measuring Tape, Carpenter's Square, Level, Clamp, and Vise Station:**

	<u>Carpenter's square</u> • Helps you make right-angle cuts. <u>Tape measure</u> • With this you can measure pieces of wood up to several feet long.		<u>Level</u> • When you need to hang something (like a picture), a level helps you make sure it doesn't tilt to one side.
	<u>Vise and Clamp</u> • A clamp holds pieces of wood together firmly for cutting or gluing. • A vise is a strong clamp attached to a workbench. • C clamps are common and come in many sizes.	 	

  - Measure a piece of wood with the measuring tape.
  - Examine how a level works and use a clamp to hold two pieces of wood together.
  - Scouts will use the Level and Carpenter's Square in the next Activity.

- **Wrap Up.** After the activities above are completed, be sure to have each Scout demonstrate the correct way to clean the last tool they used and how to store it.

◆Activity 2: Be On The Level (Requirement 2: "*Demonstrate how to check for plumb, level, and square when building.*") (Parent leader: _____)

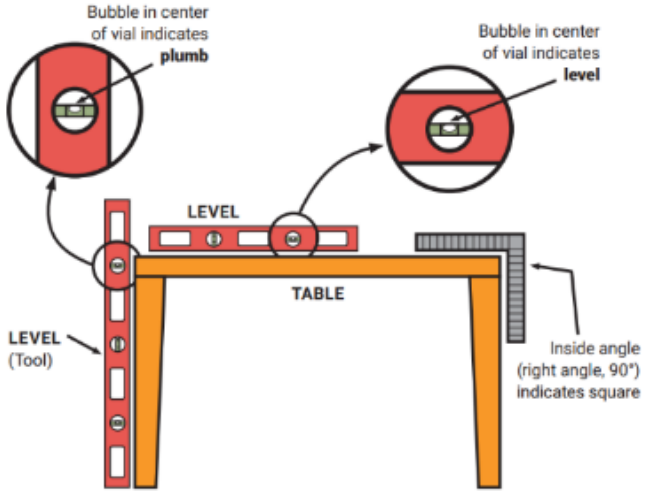
The Adventure Resources offer Activity Cards for "Plumb, Level, and Square" with a Doorway and a Table. Use what you like – or something else. The plan below adapts the substance of Table Plumb, Level, and Square.

Supply List

- Levels, enough to share. Also: Carpenter's squares, enough to share.
- One or more wooden tables.
- Plumb, Level, Square table diagram found in Additional Resources at Table.

Directions

- Gather Scouts and check for proper safety equipment including eye and foot protection.
- Explain the concept of plumb to Scouts.
  - Plumb means that something is straight vertically (up and down).
  - You expect the walls of a building to be plumb as it makes a right angle (90 degrees) with the ceiling and floor.
- If a wall isn't plumb, a standard window or door will not fit correctly into the wall.
- To demonstrate plumb, use the level on a table leg.
  - The bubble in the level should be in the center marking.
  - If not, the table leg is not plumb.



- Ask why it is important to have a plumb table.
- Explain the concept of level.
  - Level means something is flat horizontally (side to side).
  - You expect tables and shelves to be level so that when you place an object on them, it doesn't roll or slide off.
- The level tool is again used to check for level. When laid on a flat surface, the bubble will be in the center of the tube.
  - If something is not level, the bubble will float to the side that is too high.
- To demonstrate level, use the level on the tabletop.
  - The bubble in the level should be in the center marking.
  - If not, the tabletop is not level. Ask why it is important to have a level table.
- Have Scouts buddy or triple up. Provide each buddy group a level.
  - Have Scouts go around the meeting space and check for plumb on vertical surfaces like doors, windows, or walls.
  - Have Scouts go around the meeting space and check for level on flat horizontal surfaces. This could be tabletops or countertops.
- Explain the concept of square.
  - When something is square in carpentry, it means that the corners are at 90-degree angles.
  - A square has four 90-degree angles and four equal sides.
  - A table is square if it is both plumb and level.
  - Demonstrate square by using the carpenter's square on the table.
  - Ask why it is important to have a square table.
- Have Scouts buddy or triple up. Provide each buddy group a carpenter's square.
  - Have them go around the meeting space and check for square.
  - This could be door jams, windows, countertops, and cabinets.

◆Activity 3: Plans and Specifications for Building (Requirement 3: *"With the guidance of your Webelos den leader, parent, or legal guardian, select a carpentry project that requires it to be either plumb, level, and/or square. Create a list of materials and tools you will need to complete the project."*) (Parent leader: _____)

The Adventure Resources offer an Activity Card of Build Project Prep, which is detail about how to have a vote for a project to build and includes a blank sheet supplies and plan list.

- The selection is to be based on the Adventure Resources for Activity 4 with Activity Cards entitled "Project Build" for a Step Stool, a Paper Towel Holder, and a Wall Shelf.
  - Those projects mirror those shown in the *Webelos Handbook*.
- Use what you like – or something else that can be supported by parents leaders and other helpers.

◆Activity 4: Build It (Requirement 4: *"Build your carpentry project."*) (Parent leader: _____)

The Adventure Resources offer Activity Cards entitled "Project Build" for a Step Stool, a Paper Towel Holder, and a Wall Shelf. Use what you like – or something else.

- How you do this will flow from the project picked above in Activity/Requirement 3.

◆Activity 5: [*OPTION*: Fun Game We Like (Parent leader: _____):



If this meeting is too dry or the games in the Activity Cards in Adventure Resources don't resonate with you as something your Scouts will like, you can turn up the "Fun Meter" and play a game or some other Fun Activity you like. Some ideas here. NOTE: the fun game doesn't' need to be connected to today's Adventure topic – it can just be FUN!

CLOSING: A Closing ceremony ends the meeting and highlights the achievements. A Den leader can reflect on the meeting + praise Scouts for specific good actions today. Thank every Parent who helped.

- If you have them, award Pins to all who completed the requirements. Maybe end with a "Living Circle".

AFTER THE MEETING: Clean up as needed. Share refreshments if that's what you like.

Upon completion of this Adventure, your Webelos will have earned the Adventure Pin for it. Make sure they are recognized for their completion by presenting the Adventure Pins as soon as possible according to your pack's tradition. Text or email all Den parents to share these resources for future reference and so parents of Scouts who could not attend may complete this Adventure from home.

ADVENTURE RESOURCES: Den Meeting Resources and "Activity Card" options for this Adventure are found at https://www.scouting.org/cub-scout-adventures/build-it/. Those resources include the Snapshot of Adventure (included above), a "Safety Moment" of tips and links about doing this safely, and, for each Requirement, one or more "Activity Cards" you can click on for an activity to complete the Requirement.

Those "Activity Card" pages are linked below – along with the "Key" scoring of (a) whether the Activity must be done Outdoors, may be done Indoors, or involves Travel; (b) how much Energy Scouts will generate; (c) How "Supply Intensive"; and (d) Prep Time – those last 3 categories are scored on a 1 to 5 scale, with 5 being "most". Note that while that website page says "Choose one of the following" before the "Activity Cards", what that means is "Choose one of the following – *or do some other activity that will meet the Requirement*", because the Requirements are required, not the Activity Cards. In the Assembled Den Meeting Plan above we have adapted some of what's below or other ways to complete the requirement in easier ways.

1. **Learn about some basic tools and the proper use of each tool. Learn about and understand the need for safety when you work with tools.**
   - Tool Safety and Practice (Indoor; **3** of 5 Energy; **3** of 5 Supplies; **3** of 5 Prep Time)
3. **Demonstrate how to check for plumb, level, and square when building.**
   - Doorway Plumb, Level, and Square (Indoor; **3** of 5 Energy; **3** of 5 Supplies; **2** of 5 Prep Time)
   - Table Plumb, Level, and Square (Indoor; **3** of 5 Energy; **3** of 5 Supplies; **2** of 5 Prep Time)
3. **With the guidance of your Webelos den leader, parent, or legal guardian, select a carpentry project that requires it to be either plumb, level, and/or square. Create a list of materials and tools you will need to complete the project.**
   - Build Project Prep (Indoor; **1** of 5 Energy; **2** of 5 Supplies; **1** of 5 Prep Time)
4. **Build your carpentry project.**
   - Project Build – Step Stool (Indoor; **3** of 5 Energy; **4** of 5 Supplies; **4** of 5 Prep Time)
   - Project Build – Paper Towel Holder (Indoor; **3** of 5 Energy; **4** of 5 Supplies; **4** of 5 Prep Time)
   - Project Build – Wall Shelf (Indoor; **3** of 5 Energy; **4** of 5 Supplies; **4** of 5 Prep Time)